

FIG. 1

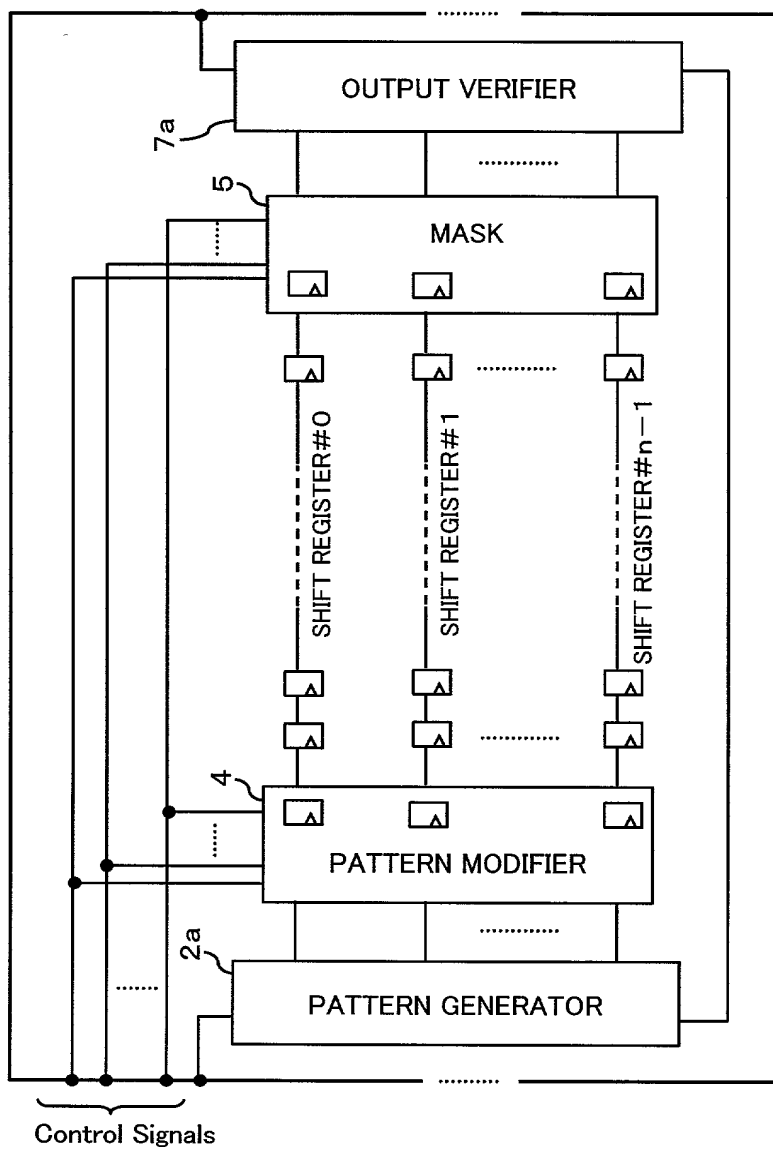


FIG. 2

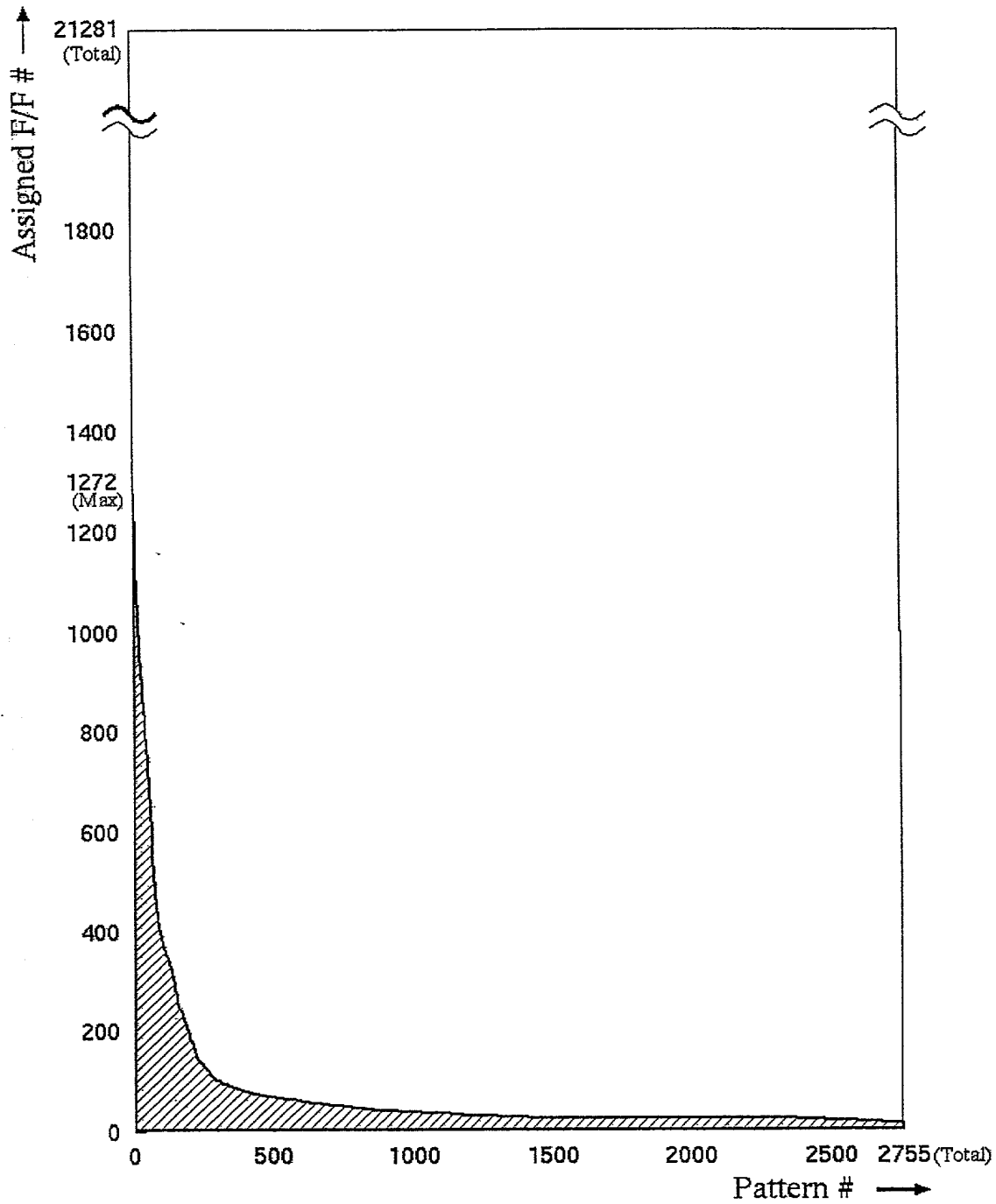


FIG. 3

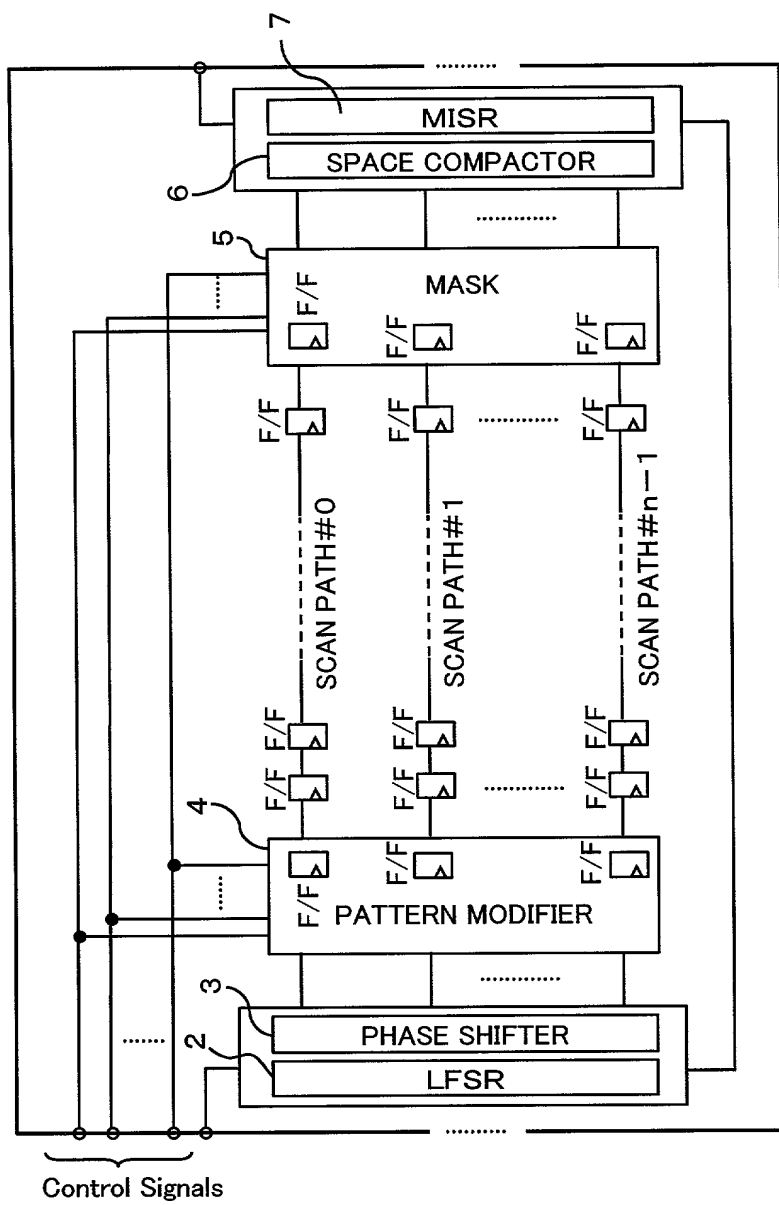


FIG. 4

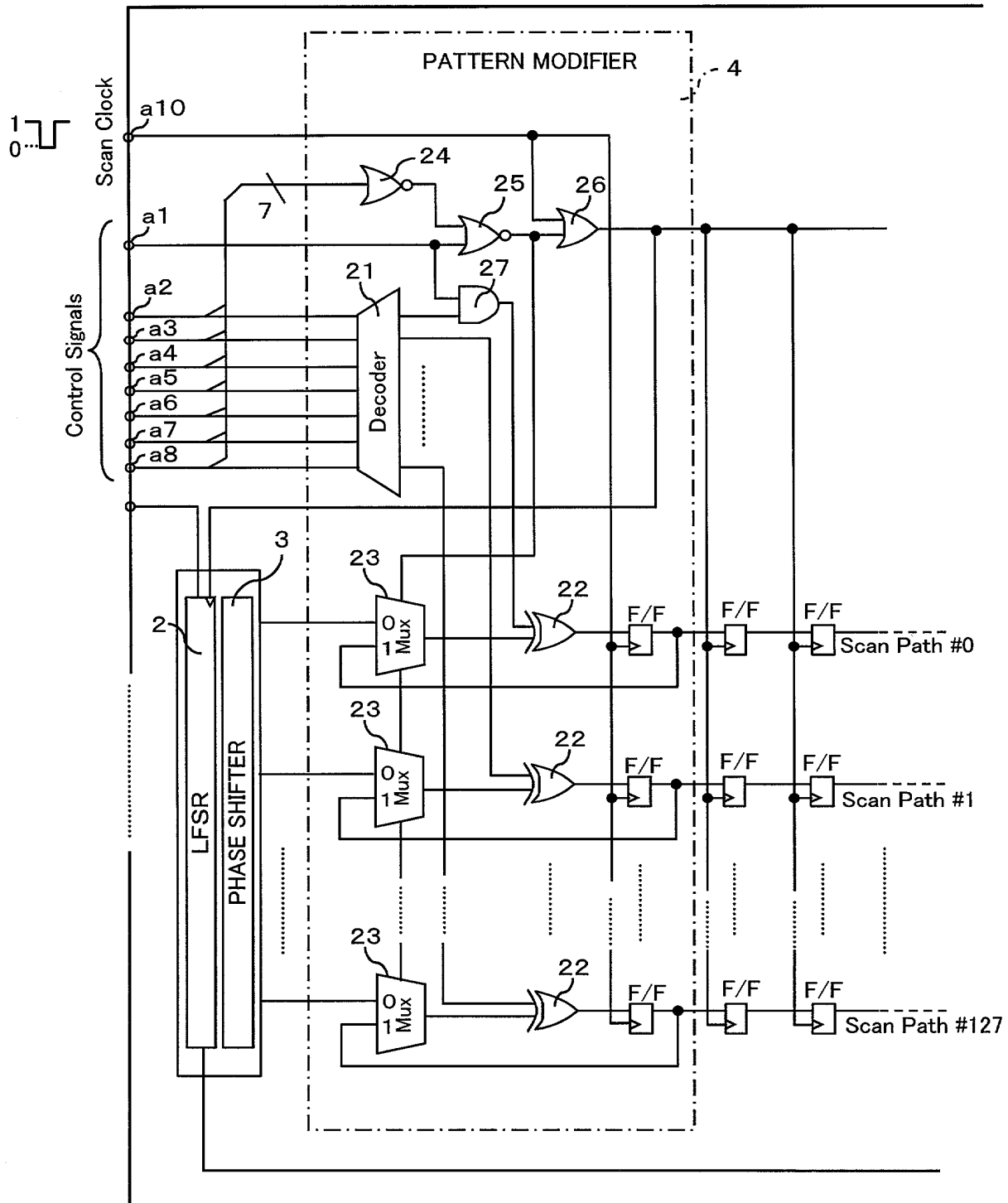


FIG. 5

SCAN PATH NUMBER	RANDOM NUMBER	ATPG
0th(#0)	0 1 0 1 0	— 1 — — —
1st(#1)	1 0 1 0 1	1 1 1 0 1
2nd(#2)	0 1 0 1 0	— — 0 — —
3rd(#3)	1 0 1 0 1	— — 1 1 —
4th(#4)	0 1 0 1 0	— 0 — — —
⋮	⋮	⋮
126th(#126)	1 0 1 0 1	— 0 — 0 —
127th(#127)	0 1 0 1 0	— 0 — 1 —

FIG. 6

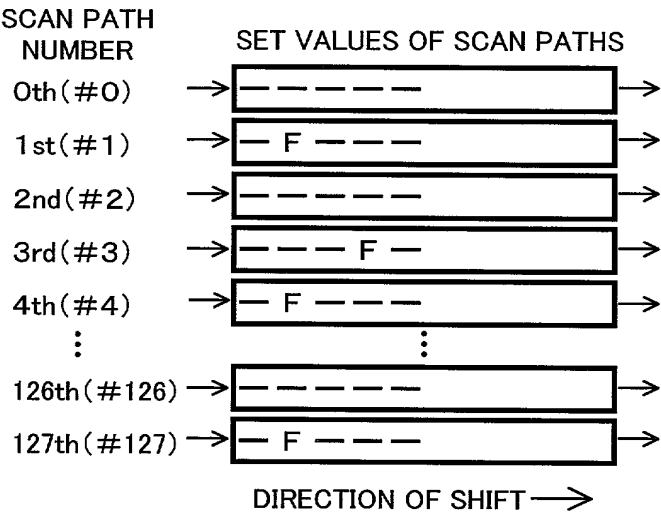


FIG. 7

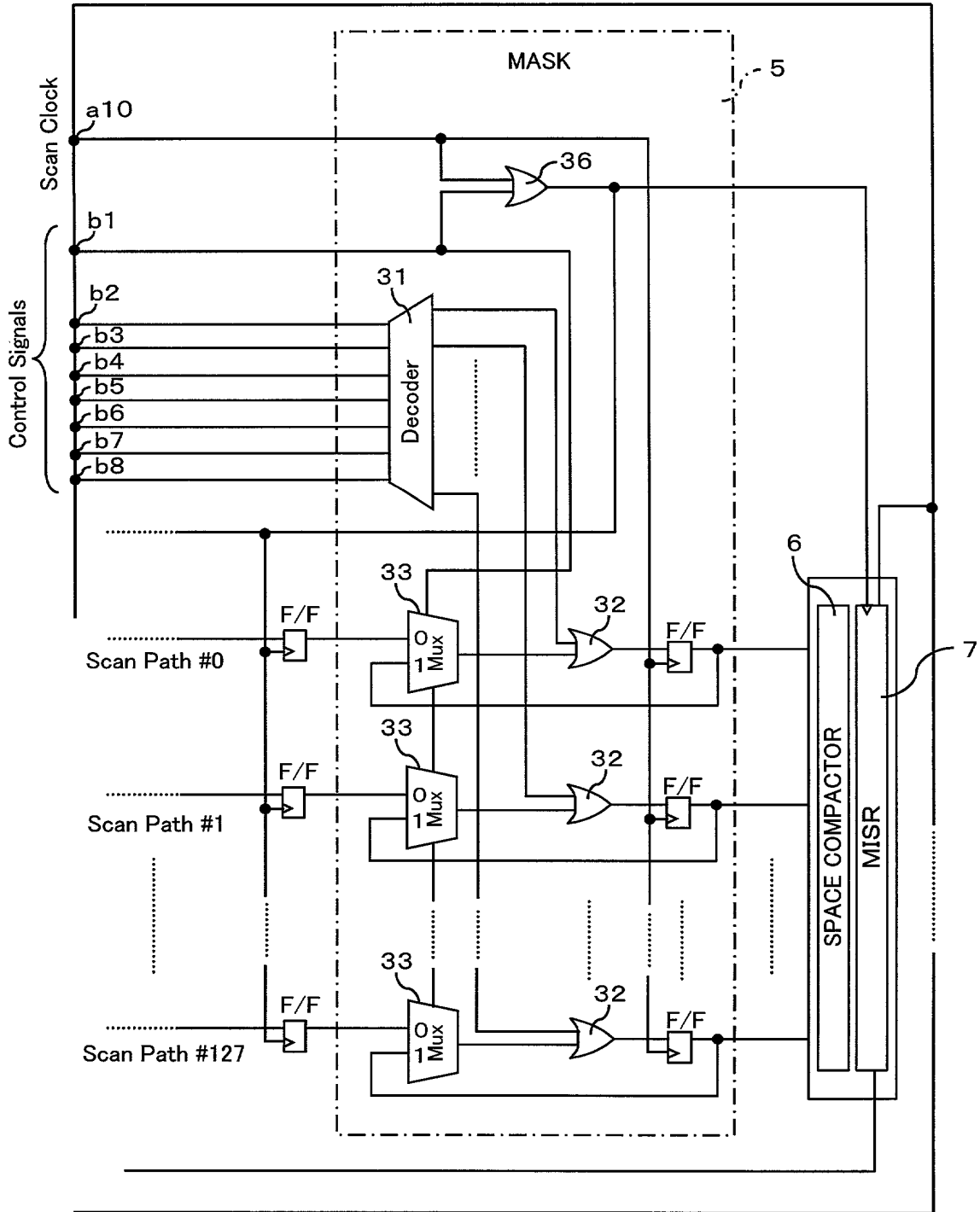


FIG. 8

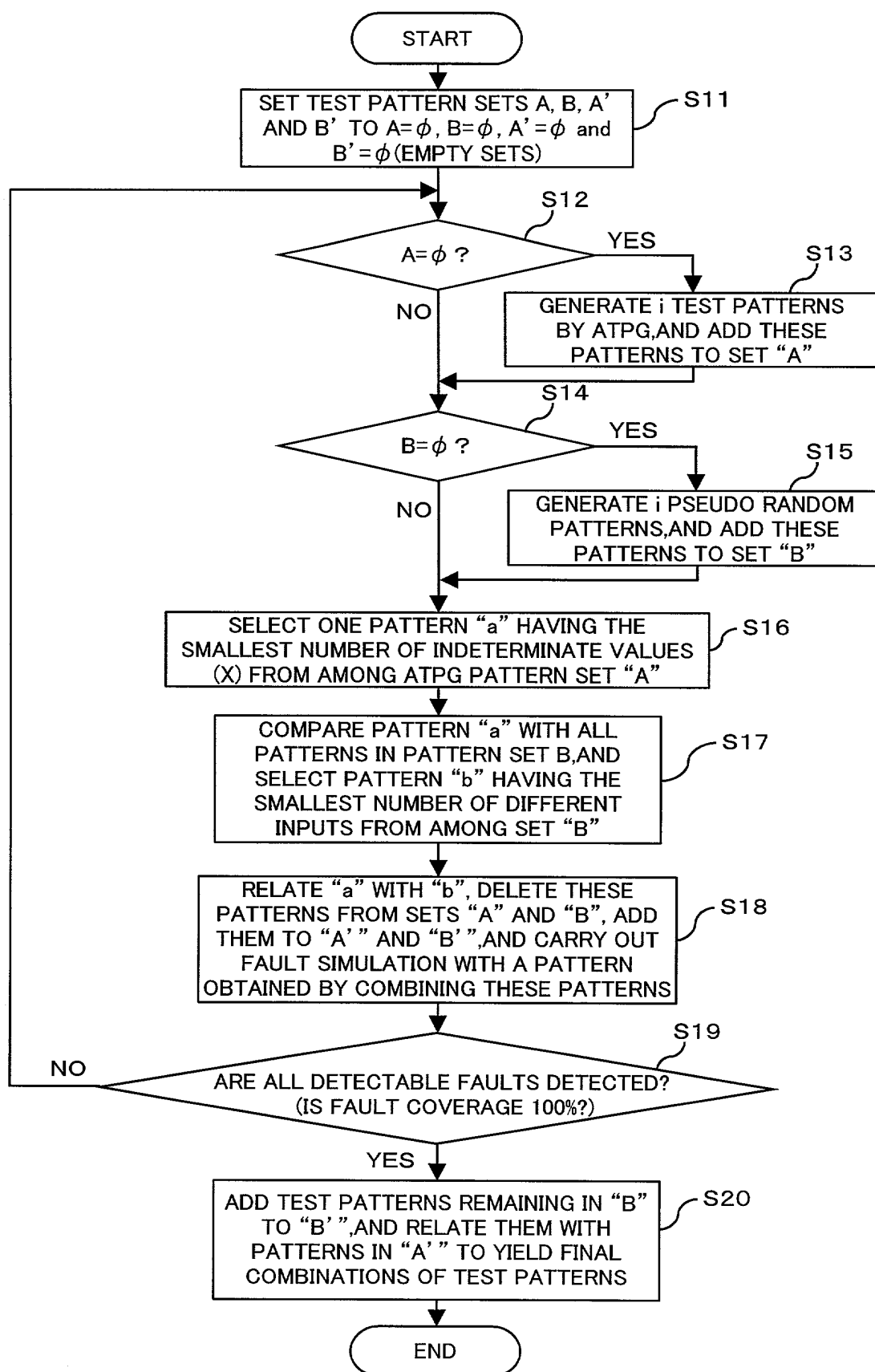


FIG. 9

1X000X11X(DP1) 011010110(RP1)	→	110000110(m=3)
X01XX1XXX(DP2) 001010101(RP2)	→	001011101(m=1)
OXXX1X1X0(DP3) 110110111(RP3)	→	010110110(m=2)

FIG. 10

1X000X11X(DP1) 110110111(RP3)	→	110110111(m=2)
OXXX1X1X0(DP3) 011010110(RP1)	→	011010110(m=0)
X01XX1XXX(DP2) 001010101(RP2)	→	001011101(m=1)

FIG. 11

ATPG PATTERN		PSEUDO RANDOM PATTERN		MODIFIED TEST PATTERN
1X000X11X(DP1)	→	011010110(RP1)	→	110000110(m=3)
X01XX1XXX(DP2)	→	001010101(RP2)	→	001011101(m=1)
0XXX1X1X0(DP3)	→	110110111(RP3)	→	010110110(m=2)
01XXX0XXX(DP4)	→	100101011(RP4)	→	010100011(m=3)
1XXXX1110(DP5)	→	000011101(RP5)	→	100011110(m=3)
10XXXXXXX(DP6)	→	100110011(RP6)	→	100110011(m=0)

FIG. 12

ATPG PATTERN		PSEUDO RANDOM PATTERN		MODIFIED TEST PATTERN
1X000X11X(DP1)	↘	011010110(RP1)	→	011010110(m=0)
X01XX1XXX(DP2)	→	001010101(RP2)	→	001011101(m=1)
0XXX1X1X0(DP3)	↗	110110111(RP3)	→	110000111(m=2)
01XXX0XXX(DP4)	↘	100101011(RP4)	→	100101110(m=2)
1XXXX1110(DP5)	→	000011101(RP5)	→	010010101(m=2)
10XXXXXXX(DP6)	→	100110011(RP6)	→	100110011(m=0)

FIG. 13

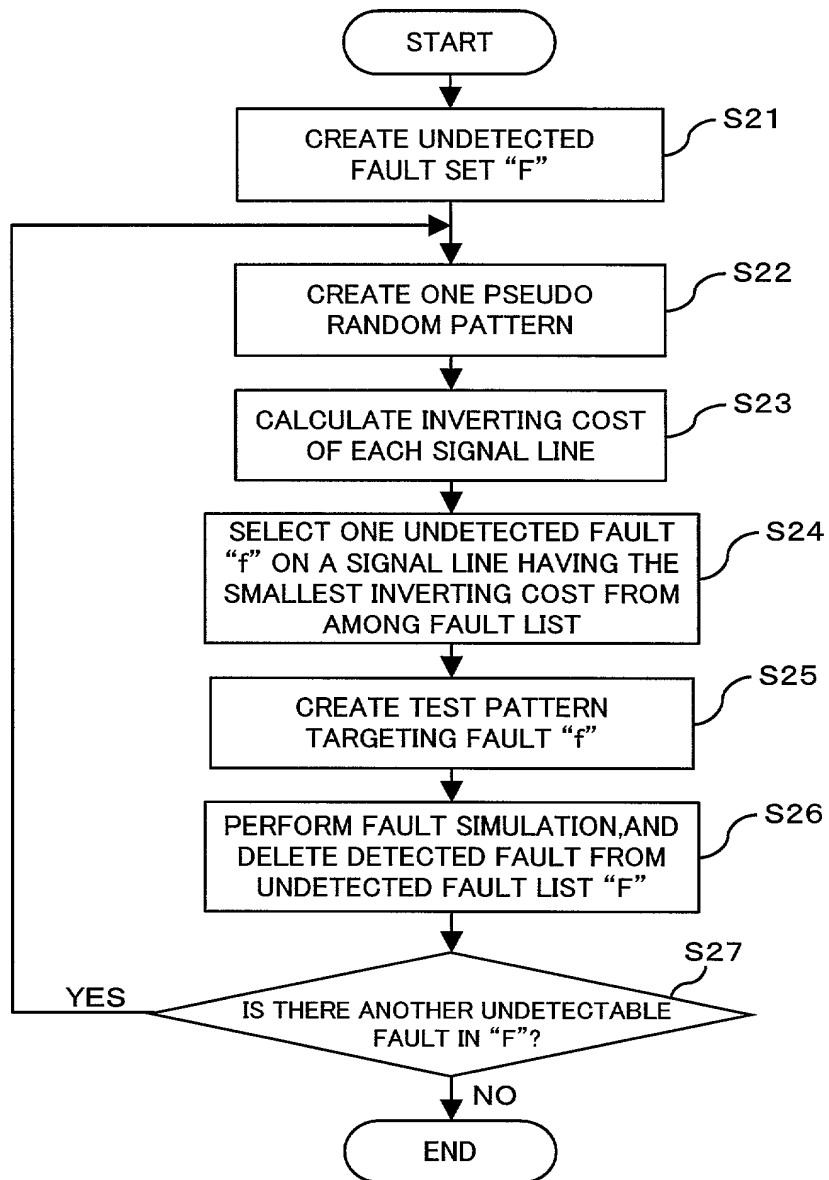


FIG. 14

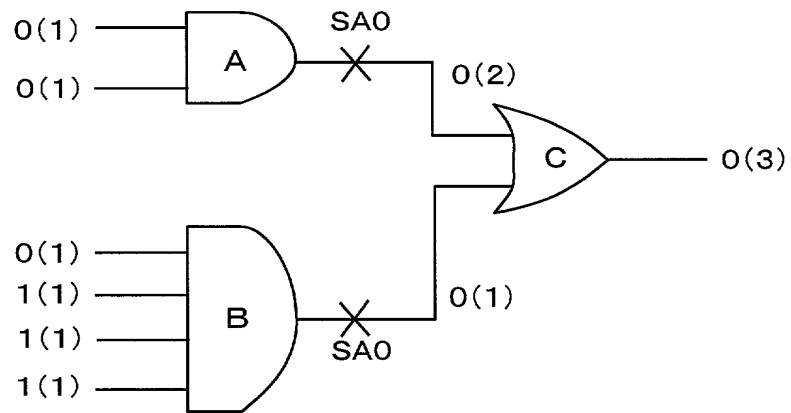


FIG. 15

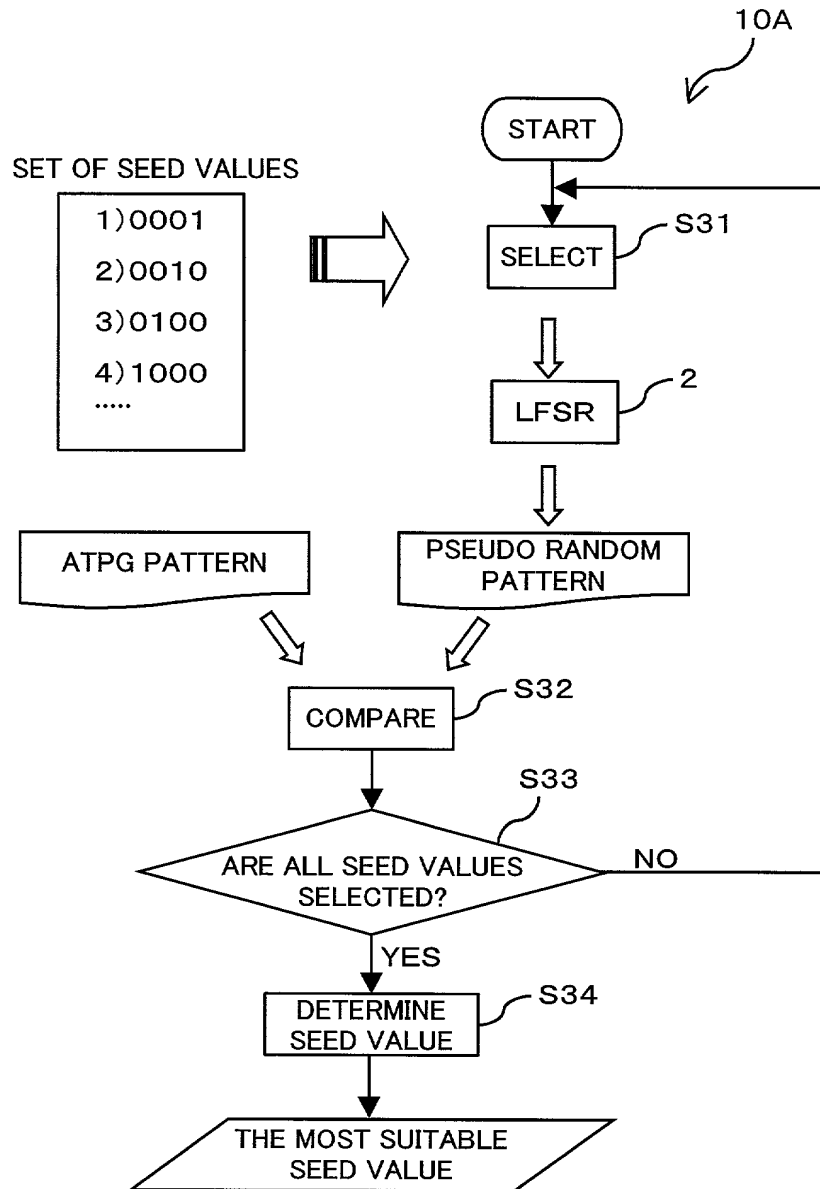


FIG. 16

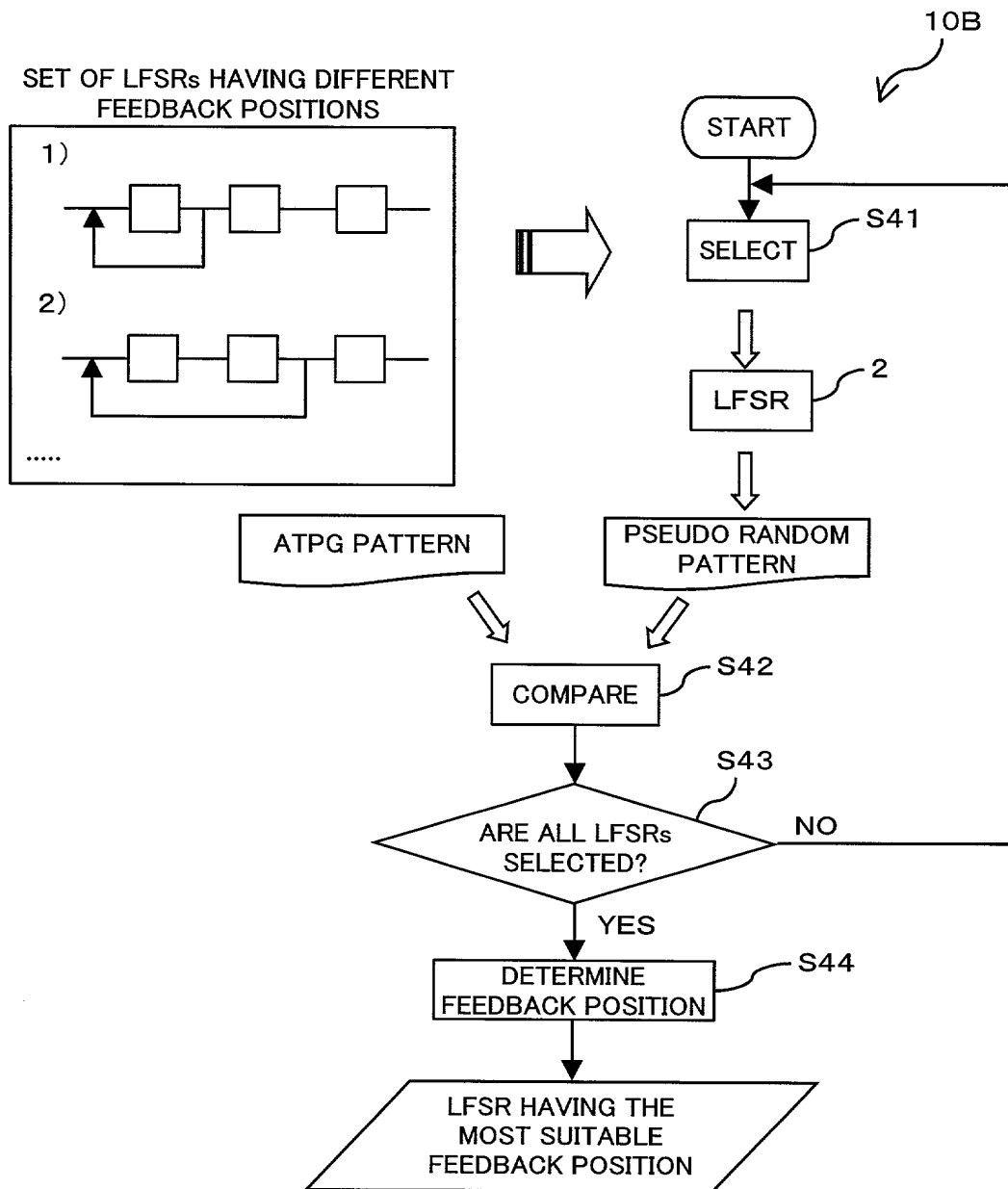


FIG. 17

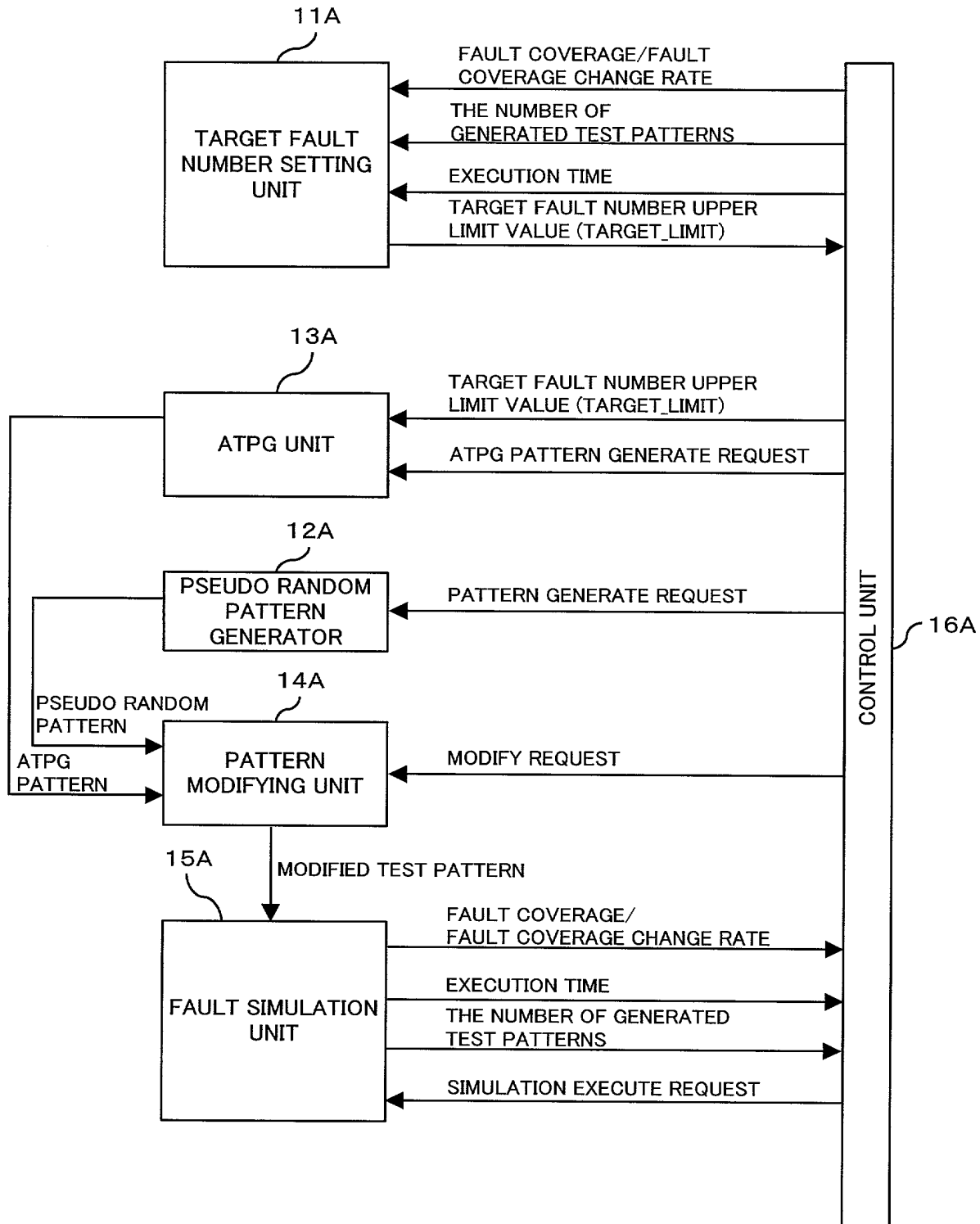


FIG. 18

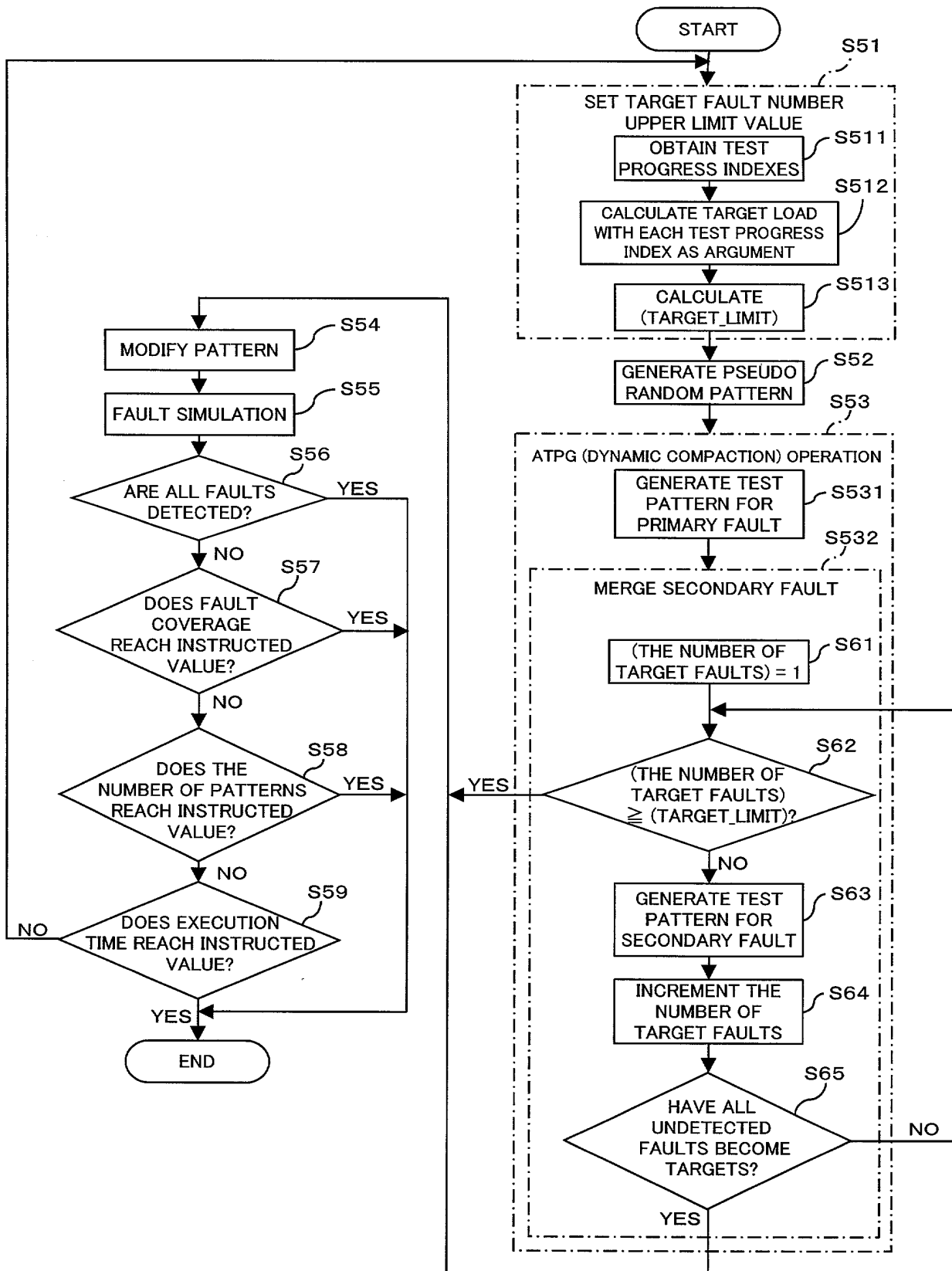


FIG. 19

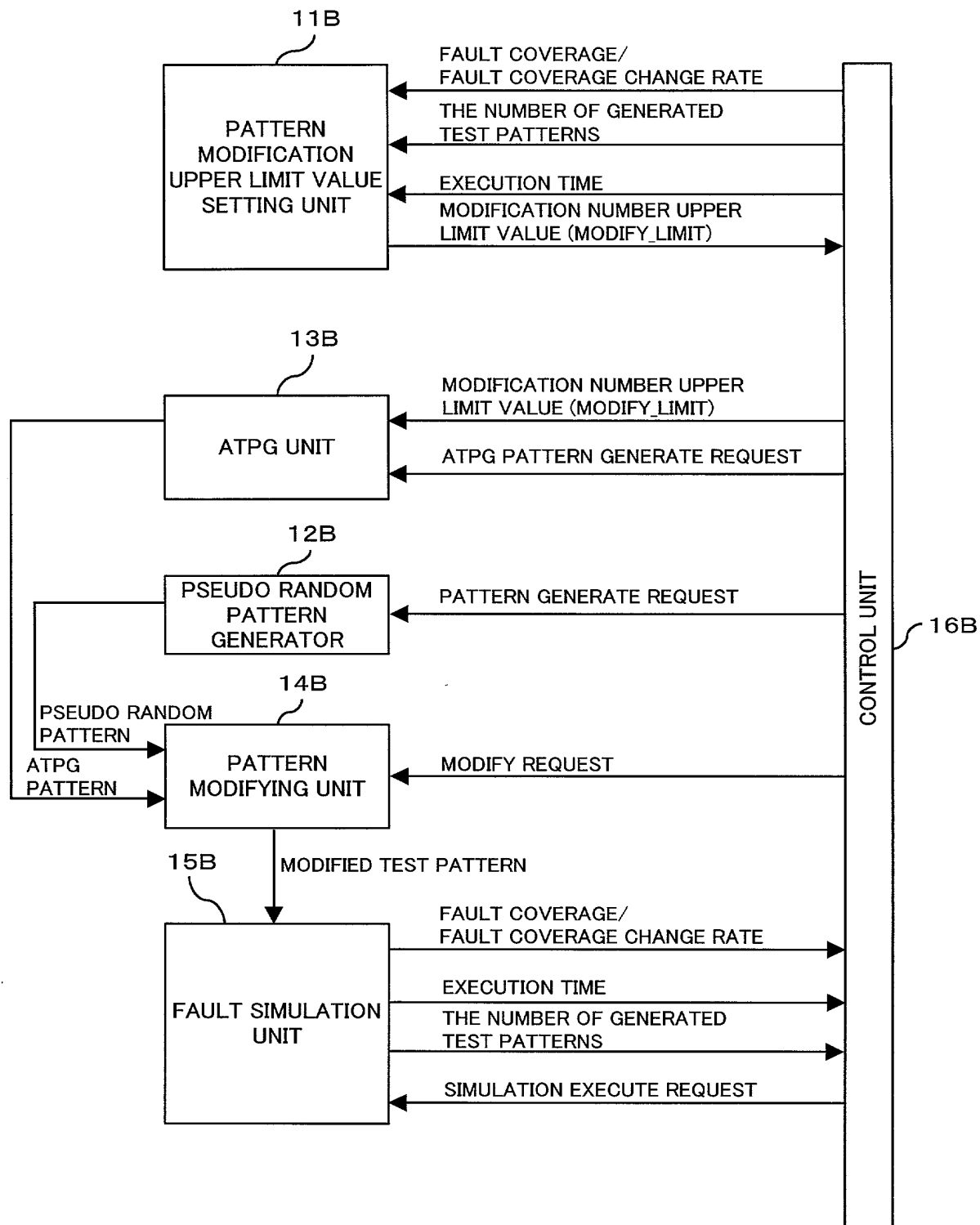


FIG. 20

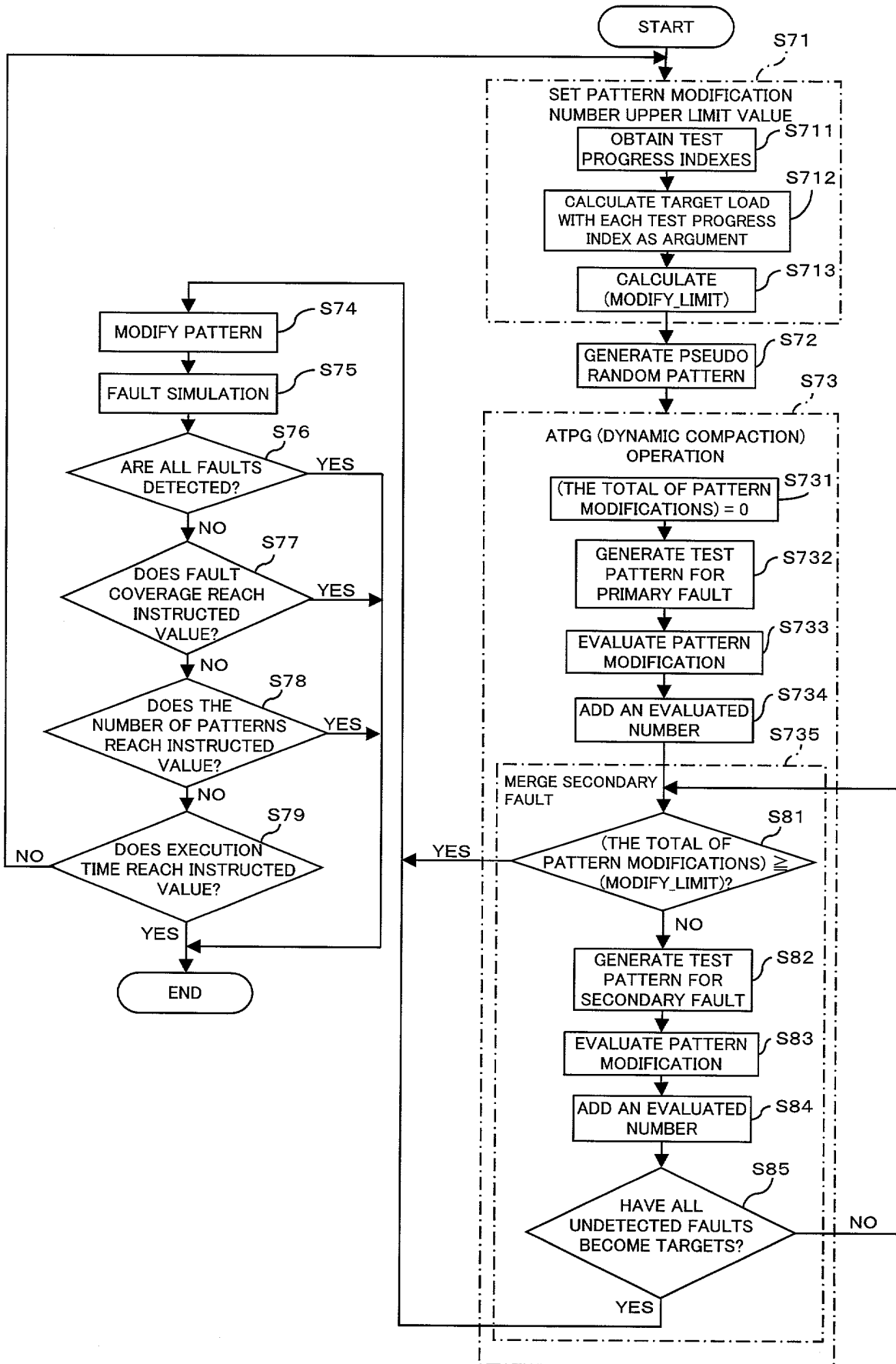


FIG. 21

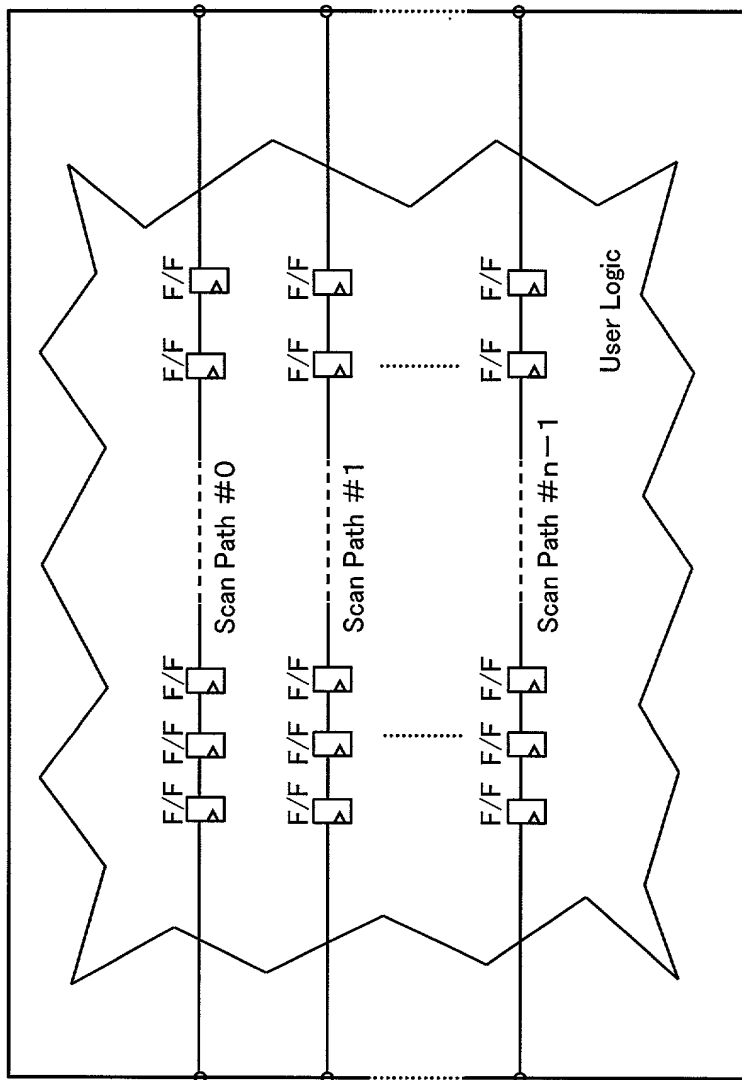


FIG. 22

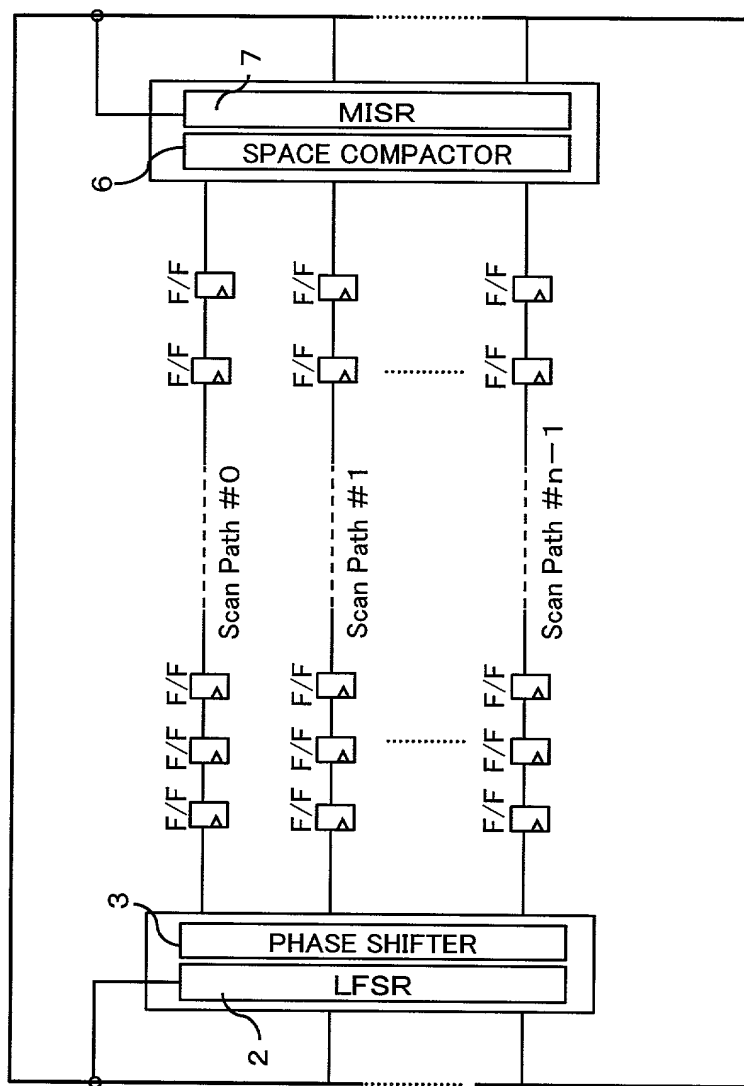


FIG. 23

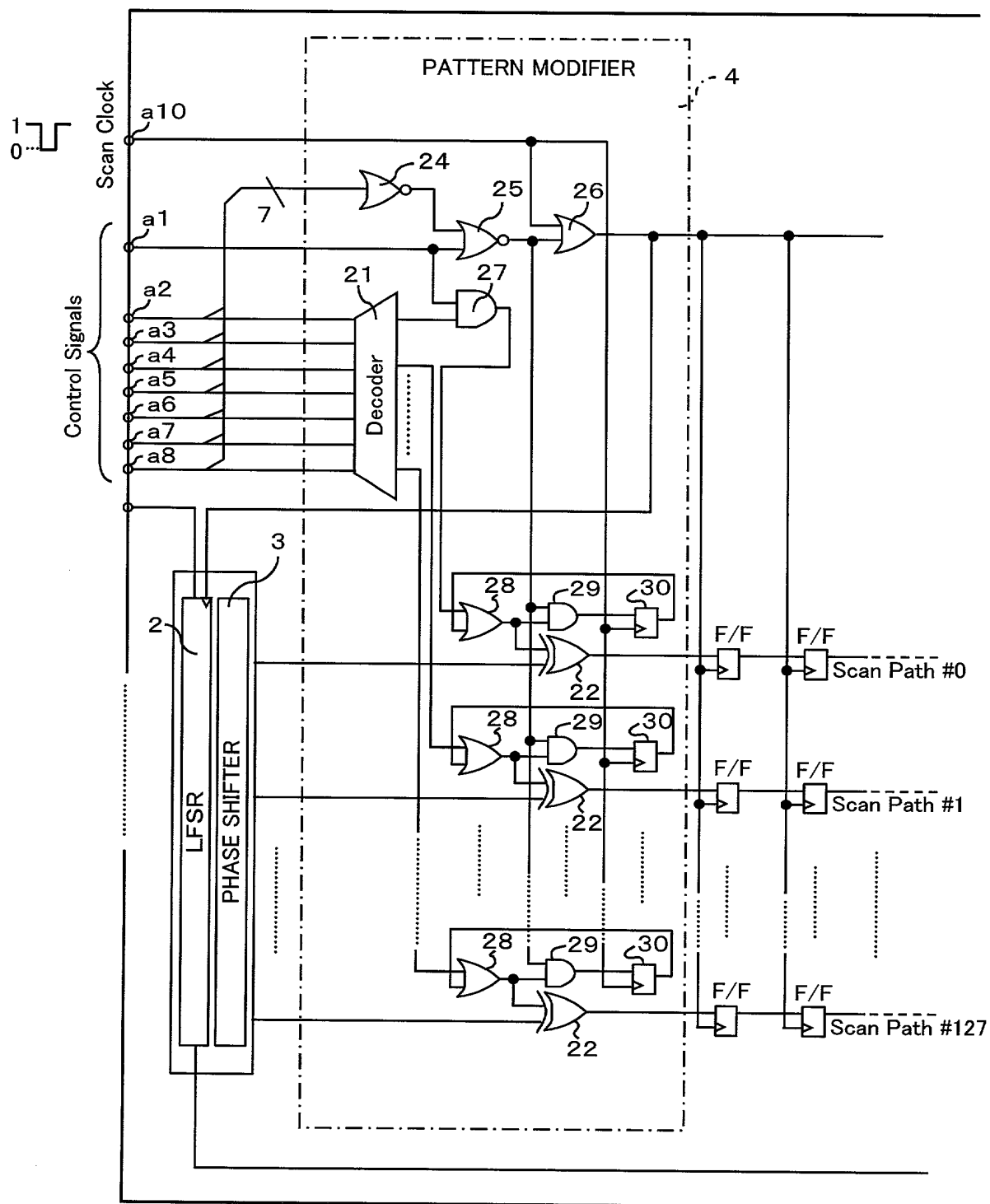


FIG. 24

